REMARKS

Applicant has made a minor amendment to claim 2 in order to clarify the language therein. Applicant respectfully submits that this amendment to claim 2 is supported by the application as originally filed and does not contain any new matter. Still further, Applicant respectfully submits that this amendment to claim 2 does not raise new issue which would require further search or reconsideration by the Examiner. As a result, the Office Action will be discussed in terms of the claims as amended.

The Examiner has rejected claims 1 and 3 under 35 USC 103 as being obvious over Zimmerman et al. in view of Shimada et al., stating that Zimmerman et al. discloses a capacitance type sensor including a substrate 28, a group of fixed electrodes 30 provided on an upper face of the substrate 28, a movable electrode plate 60 having an electrode 62 on a lower face thereof, a gap provided between the group of fixed electrodes 30 on the substrate 90 and the electrode 62, but does not mention at least a solder layer having thickness in which the solder layer supports the movable electrode plate; Shimada et al. teaches a well-known feature of a solder layer 202 which supports the movable electrode 201 and in support of his position, the Examiner refers Applicant to Fig. 12 and col. 9, lines 45-52; and it would have been obvious to one of ordinary skill in the art to have provided a solder layer as taught by Shimada et al. to the portion of the movable electrode plate 60 of Zimmerman et al. so that it can be deformed by an external force.

In reply thereto, Applicant has carefully reviewed Zimmerman et al. and respectfully submits that while Zimmerman et al. may disclose a capacitance pointing stick apparatus, Zimmerman et al. clearly does not show, suggest or teach the utilization of a solder layer, as is admitted by the Examiner.

Still further, Applicant has carefully reviewed Shimada et al. respectfully submits that Shimada et al. in Fig. 12 and at col. 9, lines 45-52 is completely silent about a solder layer. In particular, Applicant respectfully submits that Shimada et al. merely discloses a sensor that includes a support 202 for supporting the movable electrodes 201 to provide a gap 205 and the support 1250 (see Fig. 11, col. 9, lines 11-12 and Fig. 6, col. 9, lines 49-50). In addition, Applicant respectfully submits that Shimada et al. teaches away from Applicant's invention. In particular, Applicant respectfully submits that at col. 10, lines 52-56 of Shimada et al. it states:

"The support 1250 may have any value of electric conductivity since there is the insulator film 1211 on the fixed electrode 1240. However, it is preferable that the support is made of an insulator in order to suppress parasitic capacitance ...".

Still further, at col. 11, line 29 of Shimada et al. it states:

"The support is made of silicon dioxide".

Applicant refers the Examiner to the attachment A hereto wherein it clearly shows and describes silicon dioxide is electrically insulating.

From the above, Applicant respectfully submits that instead of teaching that the support would be made by a solder, a point that Shimada et al. is completely silent about, Shimada et al. actually suggests that the support be made from electrical insulator or at best that the support should be additionally provided with an insulator.

In contrast to the teachings of Shimada et al., in Applicant's invention is utilized a solder layer which is electrically highly conductive. Due to the electrical conductivity of the solder layer of Applicant's invention, the electrical connection between the conductive rubber part 21 and the contact lands L1 an L2 is provided. This construction in Applicant's invention allows the entire rubber conductive part 21 to be at ground voltage level and provides a voltage difference between the conductive rubber 21 and the fixed electrodes to form the variable capacitance parts. (See page 5, last paragraph to page 6, first paragraph of Applicant's application.)

In view of the above, therefore, Applicant respectfully submits that it would not be obvious to one of ordinary skill in the art to combine the capacitance pointing stick apparatus of Zimmerman et al. with the insulating support of Shimada et al. to create Applicant's invention as claimed by claims 1 and 3. Therefore, Applicant respectfully submits that claims 1 and 3 are not obvious over Zimmerman et al. in view of Shimada et al.

The Examiner has rejected claims 2 and 4 under 35 USC 103 as being obvious over Zimmerman et al. in view of Shimada et al. and further in view of Ishihara et al., stating that Zimmerman et al. and Shimada et al. disclose all of the Applicant's invention except that the solder has been changed to a conductive elastomer layer or conductive paint layer; Ishihara et al. teaches a metal sheet 38 and this suggests a conductive elastomer; and it would have been obvious to one of ordinary skill in the art to provide a conductive elastomer as taught by Ishihara

et al. to the movable electrode plate of Zimmerman et al. as modified by Shimada et al. to provide a smaller, thinner and lighter in weight operating apparatus.

In reply thereto, Applicant would like to incorporate by reference his comments above concerning Applicant's invention, Zimmerman et al. and Shimada et al. In addition, Applicant has carefully reviewed Ishihara et al. and respectfully submits that Ishihara et al. teaches a multi-directional switch which is entirely different from the capacitance type sensor of Zimmerman et al. and the present invention. Accordingly, Applicant respectfully submits the device of Ishihara et al. is not in the same or an analogous art to either Zimmerman et al. or Applicant's invention and it is not properly combined therewith and, if they were combined, the combination per se should be regarded as unobvious.

Still further, Applicant respectfully submits that Ishihara et al. utilizes a metal sheet 38 and there is no suggestion, teaching or showing of the utilization of a conductive elastomer. In particular, Applicant respectfully submits that the thin resilient metal sheet 38 of Ishihara et al. is formed into a circular domed shape and positioned in the case 31 on the outer fixed contacts 33 to be concentric with the case 31. As a result of the dome-like shape of the resilient metal sheet 31 and its resilience, the resilient metal sheet 38 is deformed by the pressing force and contacts the contacts 34-37 to function as a multidirectional operating switch. Accordingly, Applicant respectfully submits that the thin resilient metal sheet 38 of Ishihara et al. does not function as a support to provide a gap and cannot suggest a conductive elastomer to provide a gap of the present invention. In addition, Applicant respectfully submits that an elastomer is a rubber-like material, see attachment B to this Rule 116 Amendment. Rubber and metal are different in property and they are not in general exchangeably used with each other. Accordingly, Applicant respectfully submits that a conductive elastomer is not suggested by a thin, resilient metal sheet and Ishihara et al. does not suggest or teach to one of ordinary skill in the art that a thin, resilient metal sheet can be substituted for by a conductive elastomer.

In view of the above, therefore, Applicant respectfully submits that not only is the combination suggested by the Examiner not Applicant's invention but also the combination suggested by the Examiner is not suggested to one of ordinary skill in the art. Therefore, Applicant respectfully submits that claims 2 and 4 are not obvious over Zimmerman et al. in view of Shimada et al. and further in view of Ishihara et al.

Please charge any additional costs incurred by or in order to implement this Amendment or required by any requests for extensions of time to KODA & ANDROLIA DEPOSIT ACCOUNT NO. 11-1445.

Respectfully submitted,
KODA & ANDROLIA

By: _____
William L. Androlia
Reg. No. 27,177

2029 Century Park East
Suite 1430
Los Angeles, CA 90067
Tel: (310) 277-1391
Fax: (310) 277-4118

Certificate of Transmission

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office Fax No. (703) 872-9315 on August 7, 2003.

William L. Androlia
Name

_____ 8/7/2003
Signature Date